

C1  
C1  
B1  
said trench having an upper region and a lower region and a  
conductive trench filling formed of tungsten-containing  
material disposed in said upper and lower regions of said  
trench;

an insulation collar formed in said upper region;

a buried well formed in said substrate, said lower region at  
least partly extending through said buried well; and

a dielectric layer formed of tungsten oxide material lining  
said lower and upper regions, said dielectric layer serving as  
a capacitor dielectric.

B2  
Claim 7 (amended). The trench capacitor according to claim  
20, wherein said barrier layer is formed of a material  
selected from the group consisting of silicon oxide, silicon  
nitride, oxynitride, tungsten nitride, titanium nitride, and  
tantalum nitride.

Please add the following new claims:

B3  
Claim 20. A trench capacitor, comprising:

a substrate formed with a trench;

C1.  
said trench having an upper region and a lower region and a  
conductive trench filling formed of tungsten-containing  
material disposed in said upper and lower regions of said  
trench;

an insulation collar formed in said upper region and having an  
upper end;

claim 13  
a buried well formed in said substrate, said lower region at  
least partly extending through said buried well;

a dielectric layer formed of tungsten oxide material lining  
said lower and upper regions and having an upper end, said  
dielectric layer serving as a capacitor dielectric;

a barrier layer disposed between said dielectric layer and  
said substrate and having an upper end, said barrier layer  
disposed in said upper and lower regions; and

an insulation layer disposed between said dielectric layer,  
said barrier layer, and said insulation collar, said  
insulation layer extending from said upper end of said barrier  
layer to said upper end of said insulation collar and said  
dielectric layer.

C1  
C1  
B3  
Claim 21. The trench capacitor according to claim 20, wherein said barrier layer is formed of a metal nitride material.

Claim 22. The trench capacitor according to claim 20, wherein each of said conductive trench filling, said dielectric layer, and said insulating layer has a top surface, said trench capacitor including a conductive buried bridge portion covering at least a portion of each said top surface of said conductive trench filling, said dielectric layer, and said insulating layer and connecting to a doped region of a transistor.

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